

DURAND ET AL. -- 10/686,815  
Client/Matter: 009554-0306194

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A device for attracting and capturing flying insects, the device comprising:

a frame providing at least one outlet opening and at least one inlet opening, each of the outlet and inlet openings being communicated to a surrounding atmosphere;

an insect trap chamber communicated to the surrounding atmosphere through the at least one inlet opening;

a supply of a diffusible insect attractant;

at least one airflow generator operable to generate (a) an outflow flowing outwardly to the surrounding atmosphere through the at least one outflow opening, the outflow consisting essentially of ambient air from the surrounding atmosphere with the insect attractant diffused therein from the supply and (b) an inflow flowing inwardly from the surrounding atmosphere through the at least one inlet opening and then into the insect trap chamber, thereby enabling the inflow to draw insects attracted to the device by the insect attractant diffused in the outflow into the insect trap chamber; and

an attractant receptacle in which the supply of diffusible insect attractant is received, the attractant receptacle being positioned such that the outflow flows through the receptacle for exposure to the insect attractant, the attractant receptacle being constructed to enable the insect attractant to be removed therefrom for replacement; and

an electrically-powered heater disposed proximate the attractant receptacle, the heater being operable to heat the supply of the diffusible insect attractant in the attractant receptacle above ambient temperature so as to facilitate diffusion of the insect attractant in the outflow.

2. (Original) A device according to claim 1, wherein the diffusible insect attractant is a solid or semi-solid insect attractant.

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3. (Original) A device according to claim 2, wherein the heater element is positioned immediately adjacent the supply of the solid or semi-solid diffusible insect attractant.

4. (Original) A device according to claim 3, wherein said insect trap chamber includes a perforated trap having a plurality of perforations sized to enable the inflow drawn into said insect trap chamber to flow therethrough but to prevent passage of the insects therethrough.

5. (Original) A device according to claim 4, wherein the at least one outlet opening is communicated to the insect trap chamber by an outflow path, wherein the at least one inlet opening is communicated to the insect trap chamber by an inlet path, and wherein the inflow flowing through the perforated trap flows into the outflow path to become the outflow.

6. (Original) A device according to claim 5, wherein the at least one airflow generator comprises a fan system positioned between the outlet path and the insect trap chamber, the fan system being arranged to generate both the inflow and the outflow by drawing ambient air inwardly from the surrounding atmosphere through the at least one inlet opening, the inflow path and the perforated trap, and then forcing the ambient air outwardly to the surrounding atmosphere through the outlet path and the at least one outflow opening.

7. (Original) A device according to claim 6, wherein said fan system includes a single fan.

8. (Original) A device according to claim 7, further comprising a power cord with a connector on a free end thereof, said cord being electrically connected to said fan and said connector being configured for connection to an electrical power supply for supplying electricity to said fan.

9. (Original) A device according to claim 7, further comprising one or more replaceable batteries for supplying electrical power to said fan.

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10. (Original) A device according to claim 7, further comprising one or more solar arrays for supplying electrical power to said fan.

11. (Currently Amended) A device according to claim 2, ~~further comprising an wherein the~~ attractant receptacle ~~having~~ has at least one adjustable opening, ~~the supply of the solid or semi-solid insect attractant being received within the attractant receptacle,~~ the at least one adjustable opening being selectively adjustable so as to control exposure of the insect attractant, thereby controlling a rate of diffusion of the insect attractant.

12. (Original) A device according to claim 11, wherein the heater element encircles the supply of the solid or semi-solid diffusible insect attractant.

13. (Original) A device according to claim 11, wherein the solid or semi-solid diffusible insect attractant has an internal bore, and wherein the heater element is positioned within the internal bore.

14. (Original) A device according to claim 11, wherein the heater is a resistance heater.

15. (Original) A device according to claim 2, wherein the heater encircles the supply of the solid or semi-solid diffusible insect attractant.

16. (Original) A device according to claim 2, wherein the solid or semi-solid diffusible insect attractant has an internal bore, and wherein the heater is positioned within the internal bore.

17. (Original) A device according to claim 2, wherein the heater is a resistance heater.

18. (Original) A device according to claim 17, wherein the heater element encircles the supply of the solid or semi-solid insect attractant.

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19. (Original) A device according to claim 17, wherein the solid or semi-solid diffusible insect attractant and has an internal bore, and wherein the heater is positioned within the internal bore.

20. (Original) A device according to claim 1, wherein the outflow flows downwardly and outwardly from the device, and wherein the at least one airflow generator draws the inflow substantially counter to and adjacent an upper portion of the outflow outside the device such that insects attracted to the outflow and flying along the upper portion thereof towards the outflow opening intersect the inflow and thereby are drawn into the trap by the inflow.

21. (Original) A device according to claim 2, wherein the outflow flows downwardly and outwardly from the device, and wherein the at least one airflow generator draws the inflow substantially counter to and adjacent an upper portion of the outflow outside the device such that insects attracted to the outflow and flying along the upper portion thereof towards the outflow opening intersect the inflow and thereby are drawn into the trap by the inflow.

22. (Original) A device according to claim 6, wherein the outflow flows downwardly and outwardly from the device, and wherein the at least one airflow generator draws the inflow substantially counter to and adjacent an upper portion of the outflow outside the device such that insects attracted to the outflow and flying along the upper portion thereof towards the outflow opening intersect the inflow and thereby are drawn into the trap by the inflow.

23. (Original) A device according to claim 11, wherein the outflow flows downwardly and outwardly from the device, and wherein the at least one airflow generator draws the inflow substantially counter to and adjacent an upper portion of the outflow outside the device such that insects attracted to the outflow and flying along the upper portion thereof towards the outflow opening intersect the inflow and thereby are drawn into the trap by the inflow.

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24. (Original) A device according to claim 15, wherein the outflow flows downwardly and outwardly from the device, and wherein the at least one airflow generator draws the inflow substantially counter to and adjacent an upper portion of the outflow outside the device such that insects attracted to the outflow and flying along the upper portion thereof towards the outflow opening intersect the inflow and thereby are drawn into the trap by the inflow.

25. (Original) A device according to claim 16, wherein the outflow flows downwardly and outwardly from the device, and wherein the at least one airflow generator draws the inflow substantially counter to and adjacent an upper portion of the outflow outside the device such that insects attracted to the outflow and flying along the upper portion thereof towards the outflow opening intersect the inflow and thereby are drawn into the trap by the inflow.

26. (Currently Amended) A method for attracting and capturing flying insects, the method comprising:

providing a device comprising (a) an insect trap chamber, (b) a supply of a diffusible insect attractant, (c) at least one electrically-powered airflow generator, and (d) an attractant receptacle in which the supply of the diffusible insect attractant is received, and (e) an electrically-powered heater disposed proximate the attractant receptacle;

heating the supply of the diffusible insect attractant above ambient temperature with the electrically-powered heater to facilitate diffusion of the insect attractant;

generating, with the at least one airflow generator, an outflow flowing outwardly through at least one outflow opening provided on the device and communicated to a surrounding atmosphere, the outflow consisting essentially of ambient air from the surrounding atmosphere with the insect attractant diffused therein from the supply thereof; and

drawing, with the at least one airflow generator, an inflow flowing inwardly through at least one inflow opening and then into the insect trap chamber, the at least one inflow opening being provided on the device and communicated to the surrounding atmosphere, thereby enabling the inflow to draw insects attracted to the device by the insect attractant diffused in the outflow into the insect trap chamber, and

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flowing the outflow through the attractant receptacle for exposure to the insect attractant.

27. (Original) A method according to claim 26, wherein the diffusible insect attractant is a solid or semi-solid insect attractant.

28. (Original) A method according to claim 27, wherein the insect trap chamber includes a perforated trap having a plurality of perforations and wherein the inflow is drawn through the perforations of the trap, the perforations being sized to enable the inflow to flow therethrough but to prevent passage of the insects therethrough.

29. (Currently Amended) A method according to claim 27, wherein the ~~device further comprises an~~ attractant receptacle having has at least one adjustable opening, ~~the supply of insect attractant being received within the attractant receptacle,~~

wherein the method further comprises selectively adjusting the adjustable opening to control exposure of the insect attractant, thereby controlling a rate of diffusion of the insect attractant.

30. (Original) A method according to claim 26, wherein the inflow is drawn substantially counter to and adjacent an upper portion of the outflow outside the device such that insects attracted to the outflow and flying along the upper portion thereof towards the outflow opening intersect the inflow and thereby are drawn into the insect trap chamber by the inflow.

31. (Original) A method according to claim 27, wherein the inflow is drawn substantially counter to and adjacent an upper portion of the outflow outside the device such that insects attracted to the outflow and flying along the upper portion thereof towards the outflow opening intersect the inflow and thereby are drawn into the insect trap chamber by the inflow.

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32. (New) A device for attracting and capturing flying insects, the device comprising:  
a frame providing at least one inlet opening communicated to a surrounding atmosphere;  
an insect trap chamber communicated to the surrounding atmosphere through the at least one inlet opening;  
a supply of a diffusible insect attractant;  
an attractant receptacle, the supply of the diffusible insect attractant being received within the attractant receptacle;  
the attractant receptacle having at least one adjustable opening, the adjustable opening being selectively adjustable so as to control exposure of the insect attractant, thereby controlling a rate of diffusion of the insect attractant; and  
at least one airflow generator operable to generate an inflow flowing inwardly from the surrounding atmosphere through the at least one opening and then into the insect trap chamber, thereby enabling the inflow to draw insects attracted to the device by the insect attractant into the insect trap chamber.

33. (New) A device according to claim 32, wherein the diffusible insect attractant is a solid or semi-solid insect attractant.

34. (New) A device according to claim 32, wherein the insect trap chamber includes a perforated trap having a plurality of perforations sized to enable the inflow drawn into the insect trap chamber to flow therethrough but to prevent passage of the insects therethrough.

35. (New) A device according to claim 32, wherein the frame provides at least one outflow opening communicated to the surrounding atmosphere,  
the at least one airflow generator also being operable to generate an outflow flowing outwardly to the surrounding atmosphere through the at least one outflow opening.

36. (New) A device according to claim 35, wherein the attractant receptacle and the insect attractant are positioned such that the attractant diffuses into the outflow.

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37. (New) A device according to claim 36, wherein the outflow consists essentially of ambient air from the surrounding atmosphere with the insect attractant diffused therein.

38. (New) A device according to claim 37, wherein the insect trap chamber includes a perforated trap having a plurality of perforations sized to enable the inflow drawn into the insect trap chamber to flow therethrough but to prevent passage of the insects therethrough.

39. (New) A device according to claim 38, wherein the at least one outflow opening is communicated to the insect trap chamber by an outflow path, wherein the at least one inlet opening is communicated to the insect trap chamber by an inlet path, and wherein the inflow flowing through the perforated trap flows into the outflow path to become the outflow.

40. (New) A device according to claim 39, wherein the at least one airflow generator comprises a fan system positioned between the outflow path and the insect trap chamber, the fan system being arranged to generate both the inflow and the outflow by drawing ambient air inwardly from the surrounding atmosphere through the at least one inlet opening, the inflow path, and the perforated trap, and then forcing the ambient air outwardly to the surrounding atmosphere through the outlet path and the at least one outflow opening.

41. (New) A device according to claim 40, wherein the fan system includes a single fan.

42. (New) A device according to claim 32, further comprising an electrically powered heater operable to heat the supply of the diffusible insect attractant above ambient temperature so as to facilitate diffusion of the insect attractant.